

THE RAINS COME TO THE ABU HILLS¹.

BY

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(With a plate).

The hot weather in the Abu Hills is nearing its close. The grey rocks radiate the heat of a fierce sun. The grass is crushed to dust under foot. Many trees are leafless. Birds sit gaping. Like walking skeletons clad in parchment, cattle roam about in search of grazing. When will the rains break? The koel, as though mocking at the efforts of King Sol, rends the vibrating air with its noisy, monotonous calls. Of course it is happy, it has quite recently hoodwinked the jungle crow and forced upon it its own parental duties. Poor crow! though you have been proverbially gifted with a wise head, you cannot differentiate between your own young and those of the koel! The koel is now getting ready to shirk anew its parental duties.

While the koel was busy cuckolding the jungle crow, another cuckoo, the pied crested cuckoo [*Clamator jacobinus* (Bodd.)] victimised the jungle babbler (*Turdoides terricolor sindianus* Ticehst.) As the month of June wanes on the voice of the koel is seldom heard. It quits the hills for the plains where the common crow (*C. splendens* Vieill.) is now nesting. The common crow with all its shrewdness is saddled with the care of the koel's young. At about the same time as the koel departs from the hills, yet another cuckoo arrives to take its place. This time it is the true cuckoo, from the call of which the family gets its name, namely, the Asiatic cuckoo (*Cuculus canorus telephonus* Heine). Without the clockwork regularity of the cuckoo clock, it punctuates the air with its plaintive mellow notes. In Tod's *Travels in Western India*, p. 99, there are the following references to this cuckoo:—

'While, from an umbrageous peepul, the Kamérie² poured forth his monotonous but pleasing notes, amidst the stillness of a lovely scene, when the last tint of sunset illuminated the dark hues of the surrounding woods.' (June 13, 1822).

again, p. 113:—'The Kamérie³, as usual unseen, uttered its welcome note, and the strong, clear voice of the blackbird⁴ issued from a dark coppice, whence stole a limpid brook, all serving to remind me of the almost forgotten land to which I was about returning.' (June 13, 1822).

The voices of the cuckoo and the blackbird made Tod feel a little

¹ In my previous article on Abu (Vol. xliii, 206) I stated that Guru Sikar is the highest point between the Himalayas and the Nilgiris—my authority for this was the Gazetteer (New Ed. 1908). In the light of more recent knowledge this statement must be erased as a peak in Mysore, known as Mulainagiri is 6,317 ft.—nearly 400 ft. higher!

² 'This appellation of the cuckoo is derived from Kama, the God of Love, whose emblems are peculiarly appropriate, being a bow and arrow composed of roses and jessamine, and other flowers in which the Hindu poet allows no thorn to lurk.'

³ *Cuculus t. telephonus*.

⁴ *Turdus merula*.

home-sick; after all both these birds are hardly separable from their European kin, only that they have settled in different lands.

The Asiatic cuckoo is less ambitious than its kinsfolk for, unlike the koel, it lays its eggs in the nests of small birds, such as shrikes, chats, larks, pipits and wagtails—foster parents all much smaller than the foster children, and what a job these little 'parents' have to keep the enormous cavity filled!—a cavity sometimes large enough to engulf the feeder! Again, unlike the koel, this cuckoo does not restrict its activities to the hills, but is common in the plains as well. Its hosts breed above and below. Its flight is very hawk-like and as soon as it takes to wing there is broadcast a general warning as though some bird of prey threatened. It will often sit in the same tree for a considerable time and pipe its song; with tail fanned out and wings dropped; the head is moved backwards and forwards with each note, and the whole body moved round in a semicircle. The whole behaviour is much like that of a courting pigeon.

Many a flower has passed into fruit. The curanda (*Carissa Cavandas* L.) remains in fruit much later than it does on the Western Ghats—it is still in fruit at the end of July, whereas on the ghats fruiting is usually over by the end of May or middle of June. The red-vented bulbul [*Molpastes cafer* (L.)] takes full advantage of this source of food supply and continues to breed. I found nests with eggs, newly hatched young, and fledged young at the end of July! Having remarked on the late fruiting of the curanda it is worth noting that many of the deciduous trees which were in full foliage a month or more ago in the Ghats were yet leafless, or only just putting out new leaves! Accordingly, the flame of the forest (*Butea frondosa* Koenig), which flowers round about Bombay in January and February does not bloom till March or April about Abu. Going by train yet further north the same tree is found to flower later still. A typical example of the differences brought about by climatic change.

Silently the mists creep over the hills, and shed a portion of their moisture, only to be evaporated as it touches mother earth—she is thirsty. The rains at last! The first showers are a signal for great activity, both above and below ground—a new life sets in. Dormant Nature rises once more to a brief spell of intense activity and later will go to rest again—the ebb and flow of life. It is July, the violence of the winds increases and brings along the mists, and soon the hills are shrouded in vapour—Abu is in the clouds! The air is cool and the cuckoo is more often heard, but the koel is silent—it has gone. Water rushes over the earth, but soon disappears down the numerous water-courses. The hot rocks return part of it as steam. Birds flit gleefully about in the first showers—they sing their thanksgiving to the great 'Rain God', and pipe to Venus for success in the marriage market—it is breeding time for many of them. My 'sentries' on the hills were to keep me informed of the weather conditions—I was out to catch the early monsoon plants. According to plan, to use a well-worn phrase, I found myself on another 'Busman's Holiday' back again in Abu on the 3rd July. It was quite a different picture from the one I had seen some months back. Where pulverized plant dust covered the ground,

now appeared the new grass, and the scorched rock faces were matted with green and other hues—yes, altogether different to the drab grey and khaki of the dry weather.

The appearance of the beautiful sprays of pink flowers of an epiphytic orchid (*Aerides*) heralded the change. Some sprays were still to be seen on my arrival; they were to be found almost everywhere, on trees, bushes, and even on rocks, most of them facing southwest, the side from which the monsoon was to come, and the direction the wind blew at the time of the seed dispersal. Tod (l.c. p. 114) makes a passing reference to this orchid. Abu is poor in orchids. Besides the *Aerides*, a little rain sends up a handsome yellow ground orchid, *Eulophia ochreatea* Lindl. At first it raises its yellow plume to the heavens, but this is soon followed by the broad leaves folded fanwise in bud. About the middle of the month (July) appear the leaves of three terrestrial orchids, all *Habenarias*, much less attractive than the two mentioned above, and just interesting enough for botanists to quarrel over! Strangely enough members of the *Liliaceae* and *Amaryllidaceae* are very scarce in these hills.

In the cracks and crevices of the rocks appear curiously folded leaves, sometimes in clusters, at others in long lines, according to the situation. They soon unfold to betray their true identity—a member of the Arum lily family with a 'forbidding' name, *Sauromatum guttatum* Schott. The corms were lying hidden below ground. The plant generally flowers in the cold season, about February, and the leaves appear during the rains. The flower is no beauty—the spathe is a long strap-like affair coloured like decomposing flesh and with an odour to match—the right sort to attract carrion insects (flies) which carry the pollen from one flower to another, and thus aid in fertilization. Flowers are produced only by corms of a certain size, and the size and shape of the leaves vary in accordance with the age or size of the plant. Most of the members of this Order of plants, *Araceae*, have the tissues filled with needle-like crystals—a reason why many of them cannot be used as food. The crystals set up a fearful irritation in the mouth and other membranes, and if too numerous give rise to alarming conditions. However, for the first time I discovered that *Sauromatum* was eaten. Some of the locals collect the leaf stalks and prepare them as a vegetable. Boiling often destroys the crystals.

The irritation caused by the crystals reminds me of an incident which took place when one of the school 'bearers' saw my son collecting some corms for me. Suspecting that the lad was collecting them to eat, the bearer warned him against them. Impishly, my son replied that he had already eaten two! The man disbelieving him at first asked him to put out his tongue—there was nothing wrong with it. Accordingly he put aside his caution and chewed a couple of bits! All I need say, being a school servant he should have known boys better; he hastened to the cook for some butter to ease his suffering. This incident takes me back to my own school days. Stories are still current among the Jesuit Fathers of the trouble I caused them by eating wild plants and fruits. Other boys tried to imitate me, but very often ate the wrong

thing much to the discomfort of themselves and the infirmarian: Being a lad who had passed my childhood in the districts and with the local people I knew many of the plants that could be eaten. Catching snakes was another grievous fault of mine in those days, and still is. It was the cause of much anxiety to my parents and the good Fathers. Well, I am still alive!—the Devil looks after his own.

Two other members of the *Araceae* occur, (a) *Remusatia vivipara* Schott—a partially epiphytic species, and (b) *Colocasia antiquorum* Schott—a wild form of the edible plant. Along with *Sauromatum* or apart grows a member of the *Canna* family—a *Curcuma*—with a pinkish 'brush' of bracts which partially hide the yellowish flowers. The layman usually mistakes the entire inflorescence for either a flower or a series of flowers and consequently overlooks the flowers themselves. The canna-like leaves appear shortly after the spike and betray the true relationship. The flowers soon fade, but the spike persists for quite a time.

Shortly after the first showers many are the botanical curiosities that appear, and if the botanist wishing to study them is not on the spot at the right time, he just 'missed the bus' and will have to wait for the next season. The curiosities are too many to be recorded individually, but I cannot pass on without mentioning a couple. A curious little fern, which grows in suitable rocky places is the Snake's Tongue fern (*Ophioglossum*). Two species occur. From the layman's point of view these ferns are insignificant looking little plants, in fact, he would scarcely recognise them to be ferns, but to the botanist they are wonders! Several other ferns now begin to uncoil themselves—the leaves protruding in corners like groups of question marks. Here and there I saw some twining plants which looked suspiciously like the beginnings of a genus of the *Asclepiadaceae*, *Ceropegia*, a genus I am particularly interested in. My suspicions were soon confirmed as I eventually found it in flower—it was a *Ceropegia* and one I had not seen before. In the Western Ghats near Bombay, *Ceropegias* are not common; mainly, I think, for the reason that the locals always dig them up for the sake of the tubers which are eaten either raw or cooked. Though the 'Abuites' know the food value of the tubers they do not seem to worry about them to the same extent as the people do in the ghats.

A host of insects and other animals respond to the rain. The once silent nocturnal air, only disturbed by the occasional 'dung roller', was now full of the whirl of insects' wings. The 'grand opera' of the amphibians rends the still air. The frogs and toads, with their croaks and pipings rejoiced vociferously—it was breeding time. Just as a musician can pick out the tones of one instrument from many, so also the trained ear of the naturalist can identify the voices of the various species in the amphibian concert. There were toads, *Bufo melanostictus* and *B. andersoni*; the burrowing frog, (*Rana breviceps* Schneider) and the skipper (*R. cyanophlictis* Schneider); these four were the main voices. Now and again the bass of a bull-frog (*R. tigrina* Daud.) punctuated the chorus. This hilarity commenced at dusk and stopped at dawn—daylight drove

the revellers to hiding. After a couple of weeks the amphibians turned their attention to feeding—there were plenty of insects about. In my previous paper on Abu I did not record *B. andersoni* Bouleng. and *R. breviceps* as occurring on these hills, but now I found them to be plentiful and breeding. These two bring the total of Abu frogs to seven. Of these, all with the exception of *B. andersoni* occur in the Western Ghats. *Microhyla ornata* Boulenger and *R. breviceps* I have not found on the plain.

If insects spell food to frogs, frogs mean food to snakes. Accordingly the snakes made their appearance in fair numbers. Abu has its quota of the 'big four', the cobra, the Russell's viper, the common krait and the saw-scaled viper. The last two I did not record in my previous paper, namely, *Bungarus caeruleus* Daud. and *Echis carinata* Merr. *Echis* is usually a terrestrial beast, but at Abu I discovered it took to climbing during the rains, evidently in order to get out of the wet. The first time I ever saw an *Echis* up a tree was in Cutch and I accordingly remarked on it in my paper on the Reptiles of Cutch. In Cutch it had evidently climbed up to get out of the long grass into the morning sun, as animals usually do. Fr. Hippolytus, having read my article on the Reptiles of Cutch, wrote to me as follows:—

'I would like to say that the *Echis carinata* is very often found in trees—chiefly during the monsoon—. When in the jungle near Dohad and going on horseback to the villages I have seen it often basking on the broad leaf of *Butea frondosa*—at the height of a man on horseback. I have knowledge of 2 of my people being bitten by them on trees—one was bitten in the 1st finger of his left hand and he chopped it off at once with his axe. The other was bitten in the back as he was coming down from a tree. The Bhils know it well and call it "galtar kot", for them the viperids are not "samp" (snake) they are "kots". They call this "galtar" because it causes the bitten part to rot—"galwan".'

The behaviour of *Echis* in Abu during the rains certainly confirmed this point. A specimen killed while in a bush contained the remains of a burrowing frog.

Among the harmless species of snakes not mentioned in my previous paper, there are (1) common cat snake (*Dipsas trigonata* Boie) a dark form much resembling *Echis* in colour and habit. It may easily be mistaken for the latter; (2) Forstein's cat snake (*Dipsas forstenii* Günth.), a specimen was killed by the boys in St. Mary's High School; (3) the trinket snake (*Coluber helena* Daud.) is quite common; (4) the common wolf snake (*Lycodon aulicus* Boie) is also met with; (5) the python (*Python molurus*) is frequently killed by the Bhils; (6) the small blind snake¹ (*Typhlops*, probably *brahminus*) a specimen was discovered under a stone by my son Trevor but unfortunately it escaped later. This is the first *Typhlops* I have seen in these hills. This brings the total number of the species of snakes met with in Abu to eleven. The discovery of Forstein's cat snake, I believe, constitutes an extension of its range.

¹ Since writing, my son sent me two specimens of *T. brahminus*,

The common monitor (*Varanus monitor* Smith) appeared to be more frequent than at other times. The day I arrived my son, Carl, came to greet me with a three-footer over his shoulder as though it were a tame squirrel—he took it about with him like a dog on a leash! I could never understand why the animal never made an attempt to bite him—he handled it most carelessly. A few days later he caught another, somewhat bigger than his ‘pet’ but very much less docile. ‘Suffering Cats! another naturalist in the house’ said Ma. ‘Hav’nt I enough with one?’. The monitor is responsible for the destruction of many ground-breeding birds, however it also keeps in check a lot of vermin. Between the monitor and the mongoose the feathered game must suffer a good bit. The blood-sucker (*Calotes versicolor* Daud.) was breeding. One female contained eggs about to be laid—a few days after capture she voided 16 eggs. The geckoes (*Hemidactylus brookei* Gray) and (*H. flaviviridis* Rüppell) were common. A small skink¹ [*Ablepharus grayanus* (Stoliczka)] was not uncommon among the dead leaves in the forests. The little animals, barely more than three inches long, were difficult to catch as they glided in and out of the fallen leaves. This discovery constitutes a new record in the distribution of this lizard, as the localities quoted in the *Fauna* (2nd Ed. Vol. II, p. 312) are:—Sind, Karachi; Waggur district, Cutch; Las Bela State, Quetta district, Baluchistan. At the time when I collected this creature I had my hands full of plants and no receptacle to put it into, so I put it under my hat. I had accidentally killed it with my stick. A few yards further on I took off my hat, forgetting I had the lizard under it. It was only after I had gone some distance away that I remembered it. I searched the hat, but there was no lizard. Back I went to the spot where I had removed my hat and spent a good fifteen to twenty minutes searching for the animal without success, and gave it up as lost. On my return home I re-searched my hat and turned out the lining but could find nothing. Some time later when I sat down to write up my notes I ran my fingers through my hair. There was something there, which when I removed it, turned out to be the missing lizard! Thus a new record might have been lost, for it was only on my return to Bombay that I was able to establish the identity of this ‘rarity’.

The common myna [*Acridotheres tristis* (Linn.)] nested in the date palms and convenient holes in masonry. The brahminy myna [*Temenuchus pagodarum* (Gmelin)] which I have not noted at other seasons paraded a family on every grass slope in search of food. The jungle babbler (*Turdoides*) followed its example. By the middle of July the pied crested cuckoo had departed. The Indian robin [*Saxicoloides fulicata* (Linn.)] and the pied wagtail [*Motacilla l. maderaspatanensis* (Gmelin)] were also engaged on domestic duties. Among the leaf bases of the date palm the rufous-backed shrike (*Lanius schach* Linn.) reared its family. The black-capped black bird (*Turdus simillimus*) was in full song almost

¹ Since writing, my son sent me two specimens of another small skink, *Riopa punctata* (Gmelin) Smith—a welcome addition to the list of Abu lizards.

everywhere and was evidently breeding. It is only during the breeding season that this bird is in full song. It sits high up in a tree and pours forth its delightful liquid notes; at other times of the year I have only heard the familiar *chuck-chuck-chuck*—a warning note. I have not noticed this bird on the hill at other seasons. The red-rumped swallow (*Hirundo durica* Linn.) collected mud for a future home. The crested bunting [*Metophus melanicterus* (Gmelin)] moved about in couples and were apparently breeding. Ioras and white-eyes also seemed to have their family cares. The white-breasted kingfisher [*Halcyon smyrnensis* (Linn.)] breeds in the hills. My son found a nest with four fledged young. From the remains outside the nest, crabs seem to have figured largely in their diet. The pied kingfisher (*Ceryle rudis* Linn.) which is seen during the dry season was not found at all. The fantail flycatcher, the yellow-checked tit [*Machlolophus xanthogenys* (Vigors)] and Tickell's blue flycatcher [*Muscicapa tickelliae* (Blyth)] to judge from their behaviour were also worried with domestic cares. The brown rock-chat [*Cercomela fusca* (Blyth)] was very common and true to its name tenanted almost every stretch of rock. It was in full song and apparently breeding. Parrots though common enough during the dry season were less frequent, but in the plains they were seen in somewhat large flights on the *nim* trees. This is just a brief list of some of the birds noted.

The filling of the streams was welcomed by the fish fraternity. The streams rise and fall very rapidly according to the extent of the downpour. The small fish that inhabit them take advantage of each rise and try to get upstream; *Danio aequipinnatus* (McClelland) is one of them and is abundant. They can be clearly seen trying to clear the 'rapids', some try to jump clear and are often stranded in the effort, others try to run up in the shallow water flowing over the rocks. The locals know their habits and wait for them at suitable points and handpick them and hurl them ashore to jump to death and be gathered up later. Among the rocks is also another fisherman, the checkered water snake (*Tropidonotus piscator*). It is often seen trailing about with a 'silver tongue' protruding from its mouth—a catch.

At this season butterflies are singularly scarce. The only species I saw were *Ixias pyrene* (Linn.), *Huphina n. evegate* Cr., *Belenois mesentina* Cr., *Terias* sp. and a grass blue Lycaenid; and these too were few and far between.

Between spells of fever in bed and rambles in the forest my holiday soon passed, only to regretfully discover that I could not do all I had intended to do, in spite of a short extension of leave, due to my ill health. Nevertheless, I made several interesting discoveries and was able to amplify my notes very considerably. A naturalist, if he really wants to study nature at all times, must forget he has a sensitive skin—I forgot mine, and had to pay for it—*mea culpa*! I am always told so, but how often do we harken to 'words of wisdom'? Babies sometimes utter them!

On the 25th my wife and I bid farewell to our children and to our kind friends. Our thanks go to our friends whose kindness made this short trip possible. *Au revoir, Abu!*